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10/742,342	12/19/2003	Venkatesan Srinivasan	RAG-005	6424

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EXAMINER
THERIAULT, STEVEN B

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 January 2008*.

2a)☒ This action is **FINAL**.　　　　2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-5 and 11-28* is/are pending in the application.

　　4a) Of the above claim(s) *13-23* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-5,11,12 and 24-27* is/are rejected.

7)☒ Claim(s) *28* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

　　Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

　　a)☐ All　b)☐ Some * c)☐ None of:

　　　　1.☐ Certified copies of the priority documents have been received.

　　　　2.☐ Certified copies of the priority documents have been received in Application No. _____.

　　　　3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

　　* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
　　Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
　　Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

1.   This action is responsive to the following communications: Amendment filed 1/07/2008.

This action is made Final.

2.   Claims 1-, 3-5, 11-12, 24-28 are pending in the case. Claims 1, 12 and 24 are the independent

claims. Claims 13-23 are withdrawn and claims 2, 6-10 have been cancelled.

Specification

3.   In light of applicant's amendment to the specification the previous rejection is now moot.

Claim Rejections - 35 USC § 112

4.   Applicant has amended claim 1 to remove the previously objected to language and therefore the

previous rejection is now moot.

Claim Rejections - 35 USC § 103

5.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness

rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set
forth in section 102 of this title, if the differences between the subject matter sought to be patented and
the prior art are such that the subject matter as a whole would have been obvious at the time the
invention was made to a person having ordinary skill in the art to which said subject matter pertains.
Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966),

that are applied for establishing a background for determining obviousness under 35

U.S.C. 103(a) are summarized as follows:

1.   Determining the scope and contents of the prior art.
2.   Ascertaining the differences between the prior art and the claims at issue.
3.   Resolving the level of ordinary skill in the pertinent art.
4.   Considering objective evidence present in the application indicating obviousness or
        nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under

35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was

commonly owned at the time any inventions covered therein were made absent any evidence to

the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor

and invention dates of each claim that was not commonly owned at the time a later invention was

made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35

U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6.   **Claims 1, 3-5, 11-12, 24-27 are rejected under 35 U.S.C 103(a) as being obvious over**

Gilboa et al (hereinafter Gilboa) U.S. Patent Pub 2004/0148586 A1 published Nov. 12, 2003,

in further view of Gupta et al. (hereinafter Gupta) U.S. Patent No. 5913061 filed June 15,

1999 and issued Jan. 8, 1997.

Please note that the effective filing date of Gilboa has been analyzed and found to be Nov.

14, 2002. Provisional application 60/426,097 has been thoroughly reviewed and the

disclosure fully describes the same invention as disclosed by Gilboa in US. Patent

Application Publication 2004/0148586 A1, thus the earliest filing date of Nov. 14, 2002 is

appropriate.

In regard to **Independent claim 1,** Gilboa teaches a method for enabling an application designer

and a user to develop a user interfaces (UI)from a plurality of models without coding (Para 0009),

each of the plurality of UI models being developed using a plurality of pre-built reusable

components, the method comprising the steps of:

a. Identifying the requirements of the UI as processes, the application designer identifying the

processes (See Para 0057 and 0144). Gilboa teaches gathering user requirements.

b. Defining the tasks that are required to define the identified processes, the tasks being defined

by providing meta data to instances of a set of pre-built reusable components, the meta-data

being provided using a visual modeling environment, each pre-built reusable component

being an abstract object built to perform a function (See 0021, 0063 and Para 150) Gilboa

teaches the user interface model that uses components described in metadata and the tasks

within the processes are specified by the user interaction with the interface. A scenario or

scene are provided with specific components (See Para 0083 and 0089) and provide for

activities to be performed by the user while using the interface (See 0082). Gilboa teaches

the metadata is provided by the environment (See Para 0165).

c.   Connecting the <u>defined</u> tasks in a logical order <u>using the visual modeling environment, the</u>
      <u>defined tasks being connected</u> to model the <u>identified</u> processes, the <u>identified processes</u>
      being <u>used to develop the plurality of UI models</u> (See Figure 11a and Para 0072-0074 and
      0091-0094). Gilboa shows a process of connecting the tasks to the model structure and that
      models are used (See figure 6 and Para 12 and 29).

d.   Storing the <u>plurality of UI models</u> in a database (See Para 140) Gilboa teaches the
      information is stored in the repository (See Para 163).

Gilboa does not expressly teach:

e.   <u>Executing the plurality of UI models by an engine based on a plurality of requests, the</u>
      <u>plurality of requests being made by the application designer and the user while developing</u>
      <u>the UI, the plurality of requests being concurrently executed by loading the identified</u>
      <u>processes from the database and executing the tasks specified in the identified processes,</u>
      <u>the tasks being executed in the logical order.</u>

However, Gupta teaches a visual modeling environment that has an interchange server (engine)

that allows for simultaneous execution of object models. The server handles multiple requests via

services provided by the server (See column 3, lines 55-67 and column 4, lines 1-50 and column

10, lines 11-67 and figure 1 and 3). Gupta teaches the models are objects stored in the server

and collaboration modules allow access to the objects. The collaboration modules allow the

application objects to interact the model objects. The server has a transaction service that

handles object requests in a logical order (See column 8, lines 15-50) and can access the

database to retrieve the processes (See column 4, lines 1-6 and column 8, lines 1-15 and column

20, lines 50-67). Gupta and Gilboa both provide a system for visual modeling and for connecting

tasks to one another on the interface for the purpose of modeling the user interface actions and

components needed to complete a business function.

Accordingly, it would have been obvious to one of ordinary skill in the art at the time of

the invention, having the teachings of Gilboa and Gupta in front of them, to modify the system of

Gilboa to includes the interchange server of Gupta to allow for asynchronous processing of user

interface models in a logical order while the designer is building the system. The motivation to

combine Gupta and Gilboa comes from the suggestion in Gupta to obtain an advantage in

business efficiency and productivity by providing a flexible solution for integrating applications via

a collaboration process and services located on a central processing machine (interchange

server) and having application interfaces use the services to transform the applications using

components from other models in the same business which encourages re-use and

interoperability between multiple applications (See column 1, lines 30-40 and column 2, lines 1-10

and 55-67).

With respect to **dependent claim 3,** Gilboa teaches the method wherein the step of defining the

tasks comprises:

    a. Defining the tasks that are required to define the processes that are required to

    develop UI screens comprising (See Para 0144).

    i. Defining the tasks for placing controls on the UI screens (Para 0162).

    ii. Defining the tasks for mapping of database fields to screen variables (Para 0147).

    iii. Defining the tasks for validating the user actions at a control level and at screen level

    (Para 0148).

    iv. Defining the tasks for forwarding screen information to an application controller (Para

    0163) and defining the tasks that are required to define the processes that are required to

    develop the structure of the UI (Para 0164).

With respect to **dependent claim 4,** Gilboa teaches the method wherein the step of defining the

tasks comprises the steps of:

a. Selecting the <u>set of pre-built reusable</u> components that are required to define the identified

tasks (See Para 0144 and 151).

b. Defining the tasks, the tasks being defined by specifying meta-data for the selected <u>pre-built</u>

<u>reusable</u> components, the meta-data being process specific properties which when associated

with a component defines the corresponding task (See Para 0150-151 and 0163 - 0165). Gilboa

teaches that the components are reusable application components, which implies that they are

already built. In the alternative, if the reusable component of Gilboa is not considered an obvious

variation, then Gupta teaches a reusable component scheme where the components are already

built (See column 4, lines 10-31 and 32-50 and column 16, lines 35-67).

With respect to **dependent claim 5,** Gilboa teaches the method wherein the step of connecting

the <u>defined</u> tasks <u>in the logical order</u> comprises the steps of:

a. defining at least one Rule (Para 0099)

b. specifying <u>task</u>s to be referred to in case of success of the <u>at least one</u> Rule and specifying

<u>task</u>s to be referred to in case of failure of the <u>at least one</u> Rule (See Para 0113)

In the alternative, if the rule specifying tasks of Gilboa is not considered an obvious variation, then

Gupta teaches a rules engine to define collaboration modules that link application logic from one

function to the other (See column 7,lines 45-57).

With respect to **dependent claim 11,** Gilboa teaches the method <u>wherein the step of executing</u>

<u>the plurality of UI models</u> comprises the steps of:

a. inputting a <u>plurality of requests</u> to be processed, the <u>plurality of requests</u> being input by

<u>application designer and the</u> user <u>while developing the UI</u>(See Para 0144)

c. Identifying the <u>pre-built reusable</u> components required to process the <u>plurality of requests</u> (See

Para 0145 and 151).

d. Caching the identified <u>pre-built reusable</u> components (Para 0171)

e. executing the tasks in the logical order as defined in the identified process (Para 0180).

f. Handling errors that occur while processing the plurality of request, if errors occur in any of the above steps (See Para 0099 and 0113).

g. Logging the information related to the execution of the tasks in the database (See Para 0140).

h. Outputting the results of the execution (See Para 0167).

Gilboa does not expressly teach:

Transferring the plurality of requests to the Engine for processing

However, Gupta teaches a visual modeling environment that has an interchange server (engine) that allows for simultaneous execution of object models. The server handles multiple requests via services provided by the server (See column 3, lines 55-67 and column 4, lines 1-50 and column 10, lines 11-67 and figure 1 and 3). Gupta teaches the models are objects stored in the server and collaboration modules allow access to the objects. The collaboration modules allow the application objects to interact the model objects. The server has a transaction service that handles object requests in a logical order (See column 8, lines 15-50) and can access the database to retrieve the processes (See column 4, lines 1-6 and column 8, lines 1-15 and column 20, lines 50-67). Gupta and Gilboa both provide a system for visual modeling and for connecting tasks to one another on the interface for the purpose of modeling the user interface actions and components needed to complete a business function.

Accordingly, it would have been obvious to one of ordinary skill in the art at the time of the invention, having the teachings of Gilboa and Gupta in front of them, to modify the system of Gilboa to includes the interchange server of Gupta to allow for asynchronous processing of user interface models in a logical order while the designer is building the system. The motivation to combine Gupta and Gilboa comes from the suggestion in Gupta to obtain an advantage in business efficiency and productivity by providing a flexible solution for integrating applications via a collaboration process and services located on a central processing machine (interchange server) and having application interfaces use the services to transform the applications using components from other models in the same business which encourages re-use and

interoperability between multiple applications (See column 1, lines 30-40 and column 2, lines 1-10 and 55-67).

In regard to **Independent claim 12,** Gilboa teaches a method for enabling an application designer <u>and a user </u>to develop a <u>user interface (UI) from a plurality of models</u> without coding, <u>each of the plurality of UI models being developed using a plurality of pre-built reusable components </u>the method comprising the steps of:

a. Identifying the <u>requirements of the UI as </u>processes, the application designer identifying the processes (See Para 0144).

b. Defining the tasks that are required to define the identified processes, the tasks being defined <u>by providing meta-data to instances of </u>a set of pre-built reusable components, <u>the meta-data provided using a visual modeling environment </u>each pre-built reusable component being an abstract object built to perform a function (See Para 0146).

c. <u>Verifying the defined tasks by applying a set of pre-defined verifications on each of the defined task (</u>See Para 76)

d. <u>connecting the defined tasks in a logical order using the visual modeling environment, the defined tasks being connected to model the identified processes, the identified processes being used to develop the plurality of UI models </u>(See Figure 11a) which shows a process of connecting the tasks in a logical order and modeling them for the user. Gilboa shows the use of multiple models used by the interfaces (See figure 6 and Para 153).

e. <u>storing the plurality of UI models in a database</u> (See Para 140) Gilboa teaches the information is stored in the repository (See Para 163).

f. <u>inputting a plurality of requests to be processed, the plurality of requests being input by the application designer and the user while developing the UI </u>(See Para 144).

h. identifying the pre-built reusable components required to process the plurality of requests; (See Para 0145 and 151).

i. caching the identified pre-built reusable components (See Para 171).

j. executing the tasks in the logical order as defined in the identified processes (See Para 180).

k. handling errors that occur while processing the plurality of requests, if errors occur in any of the above steps(See Para 0099 and 0113).

l. logging the information related to the execution of tasks in the database; and (See Para 163).

m. outputting the results of the execution. (See Para 163).

Gilboa does not expressly teach:

Transferring the plurality of requests to the Engine for processing

However, Gupta teaches a visual modeling environment that has an interchange server (engine) that allows for simultaneous execution of object models. The server handles multiple requests via services provided by the server (See column 3, lines 55-67 and column 4, lines 1-50 and column 10, lines 11-67 and figure 1 and 3). Gupta teaches the models are objects stored in the server and collaboration modules allow access to the objects. The collaboration modules allow the application objects to interact the model objects. The server has a transaction service that handles object requests in a logical order (See column 8, lines 15-50) and can access the database to retrieve the processes (See column 4, lines 1-6 and column 8, lines 1-15 and column 20, lines 50-67). Gupta and Gilboa both provide a system for visual modeling and for connecting tasks to one another on the interface for the purpose of modeling the user interface actions and components needed to complete a business function.

Accordingly, it would have been obvious to one of ordinary skill in the art at the time of the invention, having the teachings of Gilboa and Gupta in front of them, to modify the system of Gilboa to includes the interchange server of Gupta to allow for asynchronous processing of user interface models in a logical order while the designer is building the system. The motivation to combine Gupta and Gilboa comes from the suggestion in Gupta to obtain an advantage in

business efficiency and productivity by providing a flexible solution for integrating applications via

a collaboration process and services located on a central processing machine (interchange

server) and having application interfaces use the services to transform the applications using

components from other models in the same business which encourages re-use and

interoperability between multiple applications (See column 1, lines 30-40 and column 2, lines 1-10

and 55-67).

In regard to **Claims 24-26,** claims 24-26 reflect the computer program product comprising

computer readable instructions for performing the steps of method claims 1 and 11, respectively,

and are rejected along the same rationale.

With respect to **dependent claim 27,** Gilboa teaches the method further comprising the step of
enabling the application designer to verify the defined tasks by applying a set of pre-defined
verifications on each of the defined tasks (See column 14, lines 32-50 and column 15, lines 20-
67). Gilboa teaches a debugging feature that can verify tasks by applying verifications.

Allowable Subject Matter

Claim 28 is objected to as being dependent upon a rejected base claim, but would be allowable if

rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: The combined

limitations of 1, 27 and 28, if written in independent form would be allowable because the prior art is not

seen as teaching a process of using a watch variables to visually verify the developed interface and the

variables being identified by the user and setting the stop points by the user and allowing the user to

analyze the models for the user interface at each break point along with the modeling features presented

in claims.

It is noted that any citation to specific pages, columns, lines, or figures in the prior art references and any interpretation of the references should not be considered to be limiting in any way. A reference is relevant for all it contains and may be relied upon for all that it would have reasonably suggested to one having ordinary skill in the art. In re *Heck*, 699 F.2d 1331, 1332-33,216 USPQ 1038, 1039 (Fed. Cir. 1983) (quoting In re *Lemelson*, 397 F.2d 1006,1009, 158 USPQ 275, 277 (CCPA 1968)).

Response to Arguments

Applicant's arguments with respect to claims 1, 3-5, 11, 12, 24-26 and 27-28 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to STEVEN B. THERIAULT whose telephone number is (571)272-5867. The examiner can normally be reached on Mon.-Fri. 10 am - 7 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Weilun Lo can be reached on (571) 272-4847. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

　　　　Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system.　Status information for published applications may be obtained from either Private PAIR or Public PAIR.　Status information for unpublished applications is available through Private PAIR only.　For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Steven B Theriault/
Examiner
Art Unit 2179

/Weilun Lo/
Supervisory Patent Examiner, Art Unit 2179